

Amendments to the Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (Currently Amended): A method of manufacturing a semiconductor device in which a plurality of combinations of a gate electrode and a gate insulating film are formed so as to extend in parallel on a semiconductor substrate, comprising the steps of:

forming a first insulating film along the surfaces of said plurality of combinations of a plurality of the gate electrode electrodes and the gate insulating film, and the surfaces of said semiconductor substrate between the adjacent gate electrodes, respectively;

forming a second insulating film different from said first insulating film on said first insulating film; and

~~forming additional insulating films by alternately repeating the steps of forming said first insulating film and forming said second insulating film~~

forming a third insulating film same as said first insulating film and different from said second insulating film on said second insulating film; and

forming a fourth insulating film same as said second insulating film and different from said first insulating film on said third insulating film.

2 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said first insulating film is formed under a condition that

a concentration of O₃ is set to 0 to 3.0wt%,

a molar ratio of O₃/TEOS is set to at most 3.0,

a temperature for film-forming is set to 450 to 550°C,

a pressure for film-forming is set to 798 to 266hPa, and

an inert gas is used as a carrier gas.

3 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said first insulating film is composed of USG, and

said second insulating film is composed of one substance selected from a group consisting of BPSG, PSG, BSG, and USG.

4 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said first insulating film has a film thickness of 3 to 5 % of a distance between the gate electrodes of adjacent two of said combinations.

5 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

the step of forming said second insulating film is performed under a condition that

a concentration of O₃ is set to 8.0 to 17.0wt%,

a molar ratio of O₃/TEOS is set to 3.0 to 15.0,

a temperature for film-forming is set to 450 to 550°C,

a pressure for film-forming is set to 798 to 266hPa,

a total concentration of an impurity composed of at least one of P and B is set to at most 15wt%, and

an inert gas is used as a carrier gas.

6 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said second insulating film has a film thickness of 5 to 10 % of the distance between the gate electrodes of adjacent two of said combinations.

7 (Canceled)

8 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said second insulating film is deposited using a reaction gas consisting of a plurality of kinds of gases which flows into a chamber, and

after the step of depositing said second insulating film, a supply into said chamber of at least one of said plurality of kinds of gases is stopped, and a gas which is different from said reaction gas and does not cause a reaction for deposition of said second insulating film flows into said chamber so that a pressure in said chamber is maintained constant.

9 (Canceled)

10 (Original): The method of manufacturing a semiconductor device according to claim 1, wherein

said second insulating film is deposited using a reaction gas consisting of a plurality of kinds of gases which flows into a chamber, and

after the step of depositing said second insulating film, at least one of said plurality of kinds of gases flows through a vent line to the outside of said chamber, and a gas which is different from said reaction gas and does not cause a reaction for deposition of said second insulating film flows into said chamber so that a pressure in said chamber is maintained constant.

11-23 (Canceled)